

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

AGA et al.

Art Unit: Unknown

Application No.: Unknown

Examiner: Unknown

Filed: April 20, 2001

For: EPOXY RESIN
COMPOSITION,
SEMICONDUCTOR
DEVICE, AND
METHOD OF
JUDGING
VISIBILITY OF
LASER MARK

CLAIMS PENDING AFTER PRELIMINARY AMENDMENT

1. An epoxy resin composition that seals a semiconductor chip, wherein a color difference between a color of said epoxy resin and a color of a standard substance stored in a colorimeter has a value of at least 30.

2. An epoxy resin composition that seals a semiconductor chip, said epoxy resin composition including an epoxy resin and a filler that fills said epoxy resin, wherein said filler contains from 10 to 15 wt%, with respect to total filler, of a filler component having an average particle size of no more than 10 μm .

3. A semiconductor device including:
a semiconductor chip;
a package of an epoxy resin encapsulating said semiconductor chip; and
a laser mark printed on a surface of said package, wherein a color difference between a color of said laser mark and a color of the surface of said package where the laser mark is not present, as measured by a colorimeter, has a value of at least 10.

4. The semiconductor device according to claim 3, wherein said package is colored with a dye.

5. A semiconductor device including:
a semiconductor chip;
a package of an epoxy resin encapsulating said semiconductor chip; and
a laser mark printed on a surface of said package, wherein a color difference between a color of said epoxy resin and a color of a standard substance stored in a colorimeter has a value of at least 30.

6. A semiconductor device including:
a semiconductor chip;
a package of an epoxy resin encapsulating said semiconductor chip; and
a filler that fills said epoxy resin, wherein said filler contains from 10 to 15 wt%, with respect to total filler of a filler component having an average particle size of no more than 10 μm .

7. A method of judging visibility of a laser mark printed on a surface of a package of a semiconductor device, the package being an epoxy resin, said method including:
measuring a color difference value between a color of the laser mark and a color of the surface of said package where the laser mark is not present, with a colorimeter; and
judging whether the color difference value is at least 10.